Lifestyle of the Tight and Frugal: Theory and Measurement

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Who has not known a tightwad? Yet this pervasive consumer trait—being frugal—has been ignored in the scholarly consumer behavior literature. This research articulates the nature of this overlooked consumer trait and then develops, evaluates, and empirically applies a multi-item scale of frugality. The results from a six-study program of empirical research are reported. These studies describe (1) the psychometric properties of a frugality measure, (2) demonstrations of how frugality assists the empirical study of consumer usage and acquisition behaviors, and (3) frugality scale norms from a probability sample of the general adult population.

In the 1970s, an assistant professor attended an aunt and uncles's 50th wedding anniversary. During a hearty greeting, the aunt asked about the then-young scholar's research. Gushing about "consumer behavior" and describing a just completed information-processing dissertation, the researcher was interrupted and asked: "So now you know about tightwads?" The new Ph.D. stammered, "No," and then explained the involvement levels where disjunctive choice occurred. As Aunt Mae's eyes glazed over, our researcher realized that we really don't know about frugality—a key, but neglected, issue for consumer research.

Frugality was once a major orientation in day-to-day American life, with colonial Massachusetts and Pennsylvania passing sumptuary laws to stem the rising tide of eighteenth-century materialism (Witkowski 1989). As evidenced by a 1767 issue of the *Boston Evening Post* urging "Save Your Money and You Will Save Your Country!" frugality was key in early America (Morgan 1967). Despite the dominance of our current materialist consumer culture, some still embrace a frugal lifestyle. From *Tightwad Gazette* (Dacyczyn 1992, 1995, 1997) advice on leaner living to a *Wall Street Journal* article on "selling to the frugal" (Graham 1996), it is clear that frugality is still alive among many consumers.

Unfortunately, just as many are unaware of frugality in the American past, so has consumer research largely ignored modern frugality. A review of the consumer research and marketing literature reveals neglect. Broadening the search to all the social sciences is no more fruitful.[1]

Understanding and measuring frugality is important for at least two reasons. First, frugality has implications for the usage stage of consumer behavior. As noted by Wells (1993), consumer researchers have overinvestigated acquisition and decision-making processes; thus, research is lacking on usage. As is demonstrated empirically, frugality does help explain how consumers use goods and services. A second reason is the field's interest in measurement (e.g., Bearden and Netemeyer 1998) and lifestyle measurement (e.g., Holbrook 1993), in particular. Thus, a multi-item scale of frugality is developed in this research.

This article begins with a review of the literature and then reports findings from qualitative research in order to establish a foundation for a conceptual definition of frugality. Next, the article reports a six-study program of empirical

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[1] A Silver Platter search examined the contents of a wide range of published sources (i.e., 1,500 journals in the social sciences and humanities, 345 business-related journals, 3,000 other journals) for use of the following terms: "frugal," "frugality," "cheap," "cheapskate," and "tightwad." The only *Journal of Consumer Research* article identified was Witkowski's (1989), with the vast majority of the 250 references identified being nonacademic sources.

TABLE 1

WORLD RELIGIONS AND FRUGALITY

Religion/culture	Teaching and source
American Indian	"Miserable as we seem in thy eyes, we consider ourselves . . . much happier than thou, in this we are content with the little we have." (Mimac chief)
Buddhist	"Whoever in this world overcomes his selfish cravings, his sorrows fall away from him, likes drops of water from a lotus flower." (Dhammapada, 336)
Christian/Jewish	"Give me neither poverty nor riches." (Proverbs 30:8)
Taoist	"He who knows he has enough is rich." (Tao Te Ching)
Hindu	"The person who lives completely free from desires, without longing . . . attains peace." (Bhagavad Gita, II 7.1)

SOURCE.—During (1992).

research designed to develop and evaluate a measure of frugality. Last, this article discusses the implications of consumer frugality for future research.

PRELIMINARY RESEARCH

A Religious Perspective

Frugality is rooted deep in our human past (Wilk 1996). Major religions discourage excess in acquisition and encourage restraint; see Table 1.

Eastern religions sanctify ascetic denunciation of possessions to reach a higher consciousness. Asceticism denies worldly distractions to allow concentration on spiritual evolution (Masson 1976). For example, Hindus reaching the third stage of Ashrama (life) go to the forest devoted to contemplation, and the fourth stage, Sannyaas, requires renouncing everything worldly. Jainists believe enlightenment occurs only through extreme nonconsumption. Jainism's founder attained enlightenment by fasting to death.

Western Judeo-Christian traditions have clear prescriptions: Old Testament law limits acquisition (Longacre 1980), and Jesus spoke five times more about money and possessions than prayer in the Bible (Fisher 1976). In pre-Christianity, the Nazarites, Rechabites, and Essenes espoused simplicity and denied property and wealth (Campbell 1907). Belk (1983) observes that acquisition is tied to four of the seven deadly sins: greed, pride, gluttony, and envy. Thus, he notes that though humans are attracted to acquisition, it brings only disenchantment. The more we have, the more we desire to have more.

Thus, all major religions encourage the ethic of restraint from both materialist desires and seeking satisfaction in achieving spiritual growth.

Early American Perspective

Reich and Zatura (1983) divide consumers' daily activities into two classes: first, doing what is needed to maintain existence and, second, doing what is wanted and really desired. Early American frugality, thus, involved denial of pleasure from luxuries while maintaining basic needs. For example, in America through the 1700s, a tradition of frugality kept colonials limited to basics and decreased demand for imported luxury products (Witkowski 1989). Likewise, frugality was pervasive throughout eighteenth-century Europe: outside of royal courts, imported luxury goods were shunned (Heilbroner 1972).

This denial has been linked by Gould, Houston, and Mundt (1996) to "worldly asceticism." Whereas asceticism is most commonly associated with Eastern religions and monasticism, Calvinism in the sixteenth century introduced worldly asceticism, which offered the hope of salvation through diligent conduct (Heilbroner 1972). Later in the eighteenth century, Puritans and Quakers promoted a "Christianity writ plain" ideal. Says Morgan (1967, pp. 4–5): "A man was supposed to be thrifty and frugal. It was good to produce but bad to consume any more than necessity required. A man was but the steward of the possessions he accumulated. If he indulged himself in luxurious living, he would have that much less to support church and society. If he carelessly consumed his substance, either from carelessness or from sensuality, he failed to honor the God who furnished him with it." This "writ plain" ethic is behind Doris Longacre's (1976, 1980) advice from the Anabaptist-Mennonite tradition. Rooted in biblical scripture, Longacre saw divine beauty in the exercise of discipline in acquisition and in the control of waste; she praised "living more with less" as living the example of Christ.

Economic Perspectives

Whereas the religious underpinnings of frugality are rooted in biblical times and earlier, today what seems more prominent is frugality based on delayed economic gratification. In the nineteenth century, John Stuart Mill (1848) advanced a theory of capital based on frugality. Assuming satisfaction from current consumption is preferable to delayed satisfaction by most, Mill argued that capital originates from the frugal few, who look to a more generous future return to reward current abstinence. More recently, Wilk's (1996) economic model uses time periods greater than individual life spans; within this model, disciplined acquisition can be explained by the benefit to future generations.

Self-Help Perspectives

Dacyczyn's (1992) contemporary advice for the frugal suggests consumers engage in a kind of economic asceticism where it is recommended that achieving idiosyncratic long-term goals (e.g., acquiring that antique automobile, not working outside the home to raise better children) will occur for most consumers with limited means only through denial of short-term whims (e.g., not dining out, not seeing first-run movies) combined with resourceful use of extant resources (e.g., eating at home, borrowing VCR tapes of

movies from the public library). Economic asceticism deals with the profane; it prescribes judicious allocation of time, money, and resources on hand to acquire a valued goal. Frugality is not deprivation but sacrificing a series of whims for the sake of obtaining a more worthy goal.

Self-help publications for the frugal (e.g., Dacyczyn 1992, 1995, 1997; Longacre 1976, 1980) show frugality as a lifestyle. With Dacyczyn, in particular, such advice includes pragmatic tips on goal setting, record keeping, and budgeting. Dacyczyn's advice also concerns wise acquisition. Tips on spending wisely include buying in bulk, buying used goods, and avoiding coupons (which Dacyczyn argues results in buying unneeded convenience products). Much advice, however, concerns careful product use and reuse, such as ingenious tips on how to extend the life of existing products, creatively reusing items on hand rather than acquiring more, using less of some product to accomplish the same as using more, and so on. Dacyczyn offers hundreds of tips for efficient consumer use including reusing plastic baggies, using less detergent than manufacturers recommend, and timing showers.

Psychological Perspectives

Like Dacyczyn's emphasis on care-in-use, DeYoung (1986, p. 285) defines frugality as "careful use of resources and avoidance of waste." DeYoung (1996) summarizes several studies using a multi-item measure of intrinsic satisfaction from resourcefulness. DeYoung notes that conserving behaviors can stem from both satisfaction with resourcefulness as well as ecocentrism (Dunlap and Van Liere 1978). The Sierra Club's *Muddling toward Frugality* (Johnson 1978), however, sees ecocentrism as equivalent to modern frugality.

Fisher and Greenberg (1995) make the Freudian observation that orderly and anal personalities are frugal. In support of this, Davidson (1987) reports a student project detecting correlation between a measure of orderliness and paying in cash and sparse tipping. In a similar vein, Ray (1979) reports a correlation between authoritarianism and a not-described measure of frugality.

The Perspective from Qualitative Research

To go beyond the literature and further develop an understanding of contemporary frugality, qualitative research was conducted. First, depth interviews were conducted with six self-professed frugal consumers. Second, 84 undergraduates were each asked to write a paragraph about a frugal person they personally know. Third, episodes of Oprah Winfrey's and Montel Williams's shows on cheap spouses were reviewed. Several key themes were revealed in these data.

First, the frugal see themselves as disciplined in their spending of money and less impulsive in their buying. Echoing Mill, they place more emphasis on long-term and less on short-term gratification. Their restraint and discipline in acquisition is reflected in these quotations:

> I feel a pinch sometimes: "I want to have it now." But it's kinda like, if you wait . . . you find you don't really gotta have it [or] you find it on sale for $10 cheaper. [The wait] . . . gives you time to think, "Do I need this?" (white female, age 20)

> I think a lot of problems [in society] are related to . . . "if it feels good, do it." Society is just not teaching you to delay gratification. . . . I think the average person decides . . . they want it and so they buy it, but they don't look at the long-term cost, . . . the high interest charges. It's easy to get, but not necessarily easy to pay for over the long-term. (white male, age 41)

Second, the frugal are resourceful in using and reusing current possessions so as not to acquire more or pay more. Echoing DeYoung and Dacycyzn, students' paragraphs written about their frugal acquaintances described resourcefulness in many ways, for example, saving wrapping paper from holiday gifts to use again next year, taking homemade popcorn to a movie. Resourcefulness was demonstrated by a *Montel Williams* guest who visited the library each week to photcopy crossword puzzles from the *New York Times*, rather than buying his own newspapers. Such industriousness is also captured in this quotation:

> Generally, I am willing to take a little longer to get [to] the same end if it will cost us less money. Like buying a whole chicken and then splitting it up . . . as opposed to buying chicken that's . . . deskinned, deboned . . . in packages. (white female, age 34)

Third, frugal consumers feel more independent than average. As these verbatim comments reflect, they feel less swayed by interpersonal influences.

> [In college] my roomates would say, "Let's go shopping." And I'd go, "No." And they'd say, "You don't have to spend money. Let's just go window shopping." I'd say, "I don't want to go look at things I can't afford to buy." That's when I noticed I was different [than others]. . . . [I] teach my children to be independent. . . . I don't buy my kids things unless they justify [it], . . . not just . . . "it's popular" or "it's in style." (white female, age 43)

> Frugality means you go without the most popular or the most accepted. (white female, age 19)

Consistent with this, was an *Oprah* guest, oblivious to his wife's embarrassment when her friends had seen him wearing old and patched clothing. Given that excessive consumption is motivated, in part, by outdoing others (Durning 1992), then frugals are likely to be less susceptible to interpersonal influence.

Construct Definition

Often, the term "frugality" conjures up Scrooge-like images of the cheap miser, whose sole goal is avarice—not spending just to accumulate money for its own sake. In contrast, the preliminary research shows frugality is not pure deprivation but reflects short-term sacrifices in buying and using consumer goods to achieve idiosyncratic longer-term goals. Thus, the preliminary research leads to this

conceptual definition: *Frugality is a unidimensional consumer lifestyle trait characterized by the degree to which consumers are both restrained in acquiring and in resourcefully using economic goods and services to achieve longer-term goals.* Religious texts, the self-help literature, and the qualitative data reveal that frugality reflects careful spending of money and both restraint and discipline in acquisition. Moreover, DeYoung's work, the self-help literature, and the qualitative research reveal clever and resourceful product/service use and reuse as a second hallmark of frugality. Finally, the religious, economic, and self-help literatures all speak to how avoiding immediate gratification serves to reach longer term goals.

In addition, the preliminary research speaks to how other traits are related to frugality. For example, the qualitative research suggests that the frugal are less swayed by interpersonal influence. The Freudian literature views the frugal as more orderly. In addition, some literature suggests that frugality may be indistinct from traits such as ecocentrism or (non)materialism.

SIX-STUDY EMPIRICAL RESEARCH PROGRAM

Empirical Research Objectives

This research program (1) develops and then evaluates a measure of consumer frugality, and then, by way of nomological tests, (2) empirically demonstrates the usefulness of frugality when studying consumer behaviors.

Six quantitative studies are reported. First is a study that develops a reliable and replicable measure of frugality. Second is a discriminant validity study examining the empirical relationships between the frugality scale and existing scales, where some of the extant scales assess response set biases and others assess a potentially confounded trait. Third is another discriminant validity study that also begins examining nomological validity. Fourth is a multimethod-multitrait study. Fifth is a purely nomological study, where the benefit of frugality in the mental accounting paradigm is demonstrated. Sixth is a known-groups study with scale norms from a general population probability sample and replications of nomological tests.

Study 1: Scale Development and Initial Testing

Study 1 involved item generation and scale purification. Based on the literature and qualitative research, a questionnaire was created with 60 frugality items embedded within a 135-item battery. Filler items were from the Annual Lifestyle Survey developed by the DDB Needham advertising agency. All items used a six-point Likert scale (6 = definitely agree, 1 = definitely disagree). Data were collected from a quota sample (50 percent male/50 percent female) of 213 nonstudent adults (aged 21–73, with 83 percent over 30 years of age).

Data were randomly divided into two halves: one half generated a factor analytic model, and the other half independently tested the model in new data.

Model Generation Analysis. The first half of the data were subjected to a model generation (MG) analysis, which is an analysis described by Jöreskog and Sörbom (1993) as both theory and data driven. The MG analysis initially used exploratory-principal-axes factor analysis on the 60 items to obtain 25 items loading greater than .5 on the first factor. Then confirmatory analyses developed better-fitting, few-factor models with face validity. Modification index values were used to delete items from the subset of 25 items to yield a single-factor model based on eight items.

The single-factor model developed with SAS PROC CALIS is shown in the first column of Table 2. Both the Bentler Comparative Fit Index value of .98 and a Tucker-Lewis rho of .97 are above the .90 advocated by Bollen (1989). Moreover the lower bound of the root mean square error of approximation (RMSEA) is below the value of .08 recommended by Browne and Cudek (1993) for a reasonable fit. Given all of this, and a small chi-square value ($\chi^2 = 25.93$, $df = 20$, $p = .17$), it is reasonable to conclude this single-common-factor model fits well in the first half of the data.

Note the face validity of the factor; the items reflect both the resourceful use and the disciplined acquisition aspects of frugality. Cronbach's alpha of the eight-item sum scale in these data was .85.

Replication Analysis. The second randomly selected half of the data were subjected to a strictly confirmatory (SC) factor analysis (Jöreskog and Sörbom 1993). The SC analysis tested the structure from the first column of Table 2 in an independent data set. The SC modeling results, reported in the second column of Table 2, show the one-factor structure to be replicable and well fitting, with index values at or over .90 and the lower bound of the RMSEA under .08. The coefficient alpha for the scale in the second half of the data was .87.

Study 1 Discussion. Study 1 developed and evaluated a multi-item scale of consumer frugality in a quota sample of adults. The eight-item scale has sufficient measurement reliability. A one-factor model of the scale displays face validity; items reflect both disciplined acquisition and resourceful use. Study 2 now turns to validity criteria beyond mere face validity.

Study 2: Discriminant Validity versus Potential Confounds

Study 2 tested discriminant validity by examining if the frugality measure (1) reflects something other than response-set biases such as social desirability or acquiescence and (2) is not confounded with an ecocentric or "Green" orientation. Testing discrimination versus being "Green" is appropriate as modern frugality may be explained by ecocentrism (Johnson 1978). Examining correlations with classic response-set measures could detect a systematic tendency for the scale to reflect not so much frugality but rather

TABLE 2

MAXIMUM-LIKELIHOOD ESTIMATES OF A ONE-COMMON-FACTOR MODEL

	Factor loading estimates: λ_x		
	Study 1: Generation sample	Study 1: Validation sample	Study 6: General population
Items:			
1. If you take good care of your possessions, you will definitely save money in the long run	.77	.70	.69
2. There are many things that are normally thrown away that are still quite useful	.63	.66	.65
3. Making better use of my resources makes me feel good	.70	.68	.68
4. If you can re-use an item you already have, there's no sense in buying something new	.74	.66	.63
5. I believe in being careful in how I spend my money	.73	.74	.73
6. I discipline myself to get the most from my money	.59	.53	.69
7. I am willing to wait on a purchase I want so that I can save money	.71	.72	.72
8. There are things I resist buying today so I can save for tomorrow	.65	.74	.68
	Study 1 ($n = 106$)	Study 1 ($n = 107$)	Study 6 ($n = 164$)
Goodness of fit indices:			
Bentler comparative fit index	.98	.93	.96
90% confidence interval of root mean square error of approximation	.00, .10	.04, .13	.00, .09
Tucker-Lewis ρ	.97	.90	.94
χ^2, p with $df = 20$	25.93, .17	31.92, .04	30.93, .06

NOTE.—All loadings estimated were statistically unequal to zero ($p < .05$).

only the tendency to self-report in a socially desirable manner.

Data for study 2 are from a convenience sample of 57 members of a university's secretarial staff (68 percent female, ranging in age from 21 to 66 years old) who completed a self-administered questionnaire with (1) frugality items, (2) the Marlowe-Crowne "Yea Saying" scale (Crowne and Marlowe 1960), (3) Couch and Keniston's (1960) "Social Desirability" scale, and (4) two ecocentric scales: Dunlap and Van Liere's (1978) and Weigel and Weigel's (1978).

The top of Table 3 reports the discriminant validity results of study 2. Frugality sum scores are not correlated ($p < .05$) with the demand-artifact measures of social desirability or acquiescence nor are they correlated with the two potentially confounding ecological scales. Although the zero correlation between the ecocentric and frugal measures may be surprising, these findings do suggest that frugal and ecocentric motivations are distinct. And, whereas the two traits have been viewed as indistinct (Johnson 1978), it is worthwhile to consider examples where they are not. For example, changing your own car's engine oil (doing it yourself to save) results in a not-easily-resolved ecological problem of disposing used oil and filters. Alternatively, buying organically grown produce (grown without harmful chemical fertilizers and herbicides) costs more than produce grown with the aid of agrochemicals.

Discussion of Study 2. The study provides evidence that the frugality measure (1) is not confounded with response-set biases and (2) is divergent from ecocentrism. Thus, there is initial evidence for the discriminant validity of the frugality measure.

This evidence, however, is limited. First, the 30-year-old Marlowe-Crowne scale may underestimate response bias (Ballard, Crino, and Rubenfield 1988). Thus, research with a more refined and recent measure of desirable responding is in order. Second, only discrimination versus ecocentrism was examined. Confounds with competing consumer behavior traits were not examined. For example, the frugality scale's variation may be totally accounted for by Lichtenstein, Ridgway, and Netemeyer's (1993) measure of coupon proneness. Likewise, Prelec et al. (1997) see frugality as the mere opposite of compulsive buying. Thus, discrimination tests with potential consumer scale confounds, such as compulsive buying, are in order.

Study 3: Discriminant and Nomological Validity

Study 3 tests the frugality measure's ability to discriminate versus (1) a more contemporary response-set measure, Paulhus's (1984, 1991) Balanced Inventory of Desirable Responding (BIDR), and (2) a set of four consumer behavior traits. These four traits were Faber and O'Guinn's (1992) measure of compulsive buying (CB), Lichtenstein, Netemeyer, and Burton's (1990) measures of coupon proneness

TABLE 3

SCALE CORRELATIONS[a] AND RELIABILITY[b] ESTIMATES FROM STUDIES 2 AND 3

	Results from study 2				
	Frugality scale (1)	Social desirability (2)	Acquiescence scale (3)	Weigel and Weigel's ecological (4)	Dunlap and Van Liere's ecological (5)
(1)	.88				
(2)	.17	.82			
(3)	−.10	−.33*	.77		
(4)	.05	−.03	−.12	.68	
(5)	−.09	−.07	−.26	.54*	.78

	Results from study 3					
	Frugality scale (1)	Balanced inventory of desirable responding (2)	Compulsive buying (3)	Coupon proneness (4)	Value conscious (5)	Price conscious (6)
(1)	.73					
(2)	−.14	.75				
(3)	−.25*	−.33*	.75			
(4)	.14	−.03	.13	.88		
(5)	.54*	−.08	−.02	.33*	.91	
(6)	.45*	.49*	.12	.41*	.46*	.80

[a]Correlations shown in off-diagonals; $p < .05$ that $\rho \neq 1$ for all sample correlations shown in this table.
[b]Cronbach's α reliability estimates shown on main diagonals.
*$p < .05$ that $\rho \neq 0$.

(CP) and value consciousness (VC), and Lichtenstein et al.'s (1993) measure of price consciousness (PC). Thus, for example, study 3 tests if frugality is merely the opposite of compulsive buying. Also, in a nomological test, study 3 examines the scale's ability to explain an index of restrained consumer use behaviors.

Data were from a convenience sample of 90 adults (60 percent female, aged 18–80, with an average age of 45) at airport departure gates. With the cooperation of airport and airline management, passengers waiting to board flights were approached to complete a self-administered questionnaire before boarding. Completed questionnaires were obtained from 85 percent of those approached.

Discriminant Validity. The first column in the bottom of Table 3 reports the evidence from study 3 for the discriminant validity of frugality sum scores. Concerning response bias, frugality is not correlated ($p < .05$) with Paulhus's (1991) BIDR measure. Consistent with the Marlowe-Crowne-scale findings in study 2, the frugality measure is again shown independent from response bias.

As also shown in Table 3, no correlations with frugality sum scores are equivalent to unity ($p < .05$). The frugality scale's nonzero correlations are comparable to values found between conceptually distinct, yet related, traits; see the correlations in Table 3 between Lichtenstein et al.'s (1990, 1993) CP, VC, and PC scales. Thus, evidence for discriminant validity is extended beyond ecocentrism.

Frugality sum scores are, as expected, positively correlated with being value conscious, price conscious, and noncompulsive in buying.

It is important to note that frugality and coupon proneness are not correlated. As per a *Tightwad Gazette* admonition to avoid coupon use (coupons lead to buying unneeded convenience products), this noncorrelation is reasonable. This finding again shows frugality as distinct from other traits.

Whereas the correlations in Table 3 between frugality, price consciousness, and value consciousness are statistically unequal to unity ($p < .05$), the correlations are attenuated by random measurement error. Thus, additional tests of discrimination among these three traits, based on structural modeling where measurement error is taken into account, were performed.

Treating both value consciousness and price consciousness as consequences of frugality allows structural modeling tests of discriminant validity via Fornell and Larcker's (1981) method of shared variance. The Fornell-Larcker method implements Campbell and Fiske's (1959) second requirement for discriminant validity, namely, that variables should share more variance with independent efforts to measure the same trait than the variance shared with measures designed to assess another trait. In this method, discriminant validity was tested with two structural equation models by examining if the average variance extracted or "reliability" of the frugality construct, $\rho_{vc}(\xi)$, was greater

than the shared variance, γ^2, between frugality and its consequence. Satisfying the inequality provides additional evidence for discriminant validity. In one two-factor model, using frugality as the antecendant of value consciousness, inequality is found ($\rho_{vc}(\xi) = .92 > \gamma^2 = .14$). Likewise, in a second model with price consciousness as the consequence, inequality is found again ($\rho_{vc}(\xi) = .92 > \gamma^2 = .17$). Thus, the shared variance analysis provides additional evidence for the distinctness of frugality from both price consciousness and value consciousness.

Discrimination between frugality, price consciousness, and value consciousness was further tested with the fit of nested confirmatory factor models (Anderson and Gerbing 1988). An initial three-factor confirmatory model (with correlations between the three factors left free to unrestricted estimation) adequately accounts for the covariances between the items used in the three scales ($\chi^2 = 206.79$, $df = 167$, $p = .02$, Bentler comparative fit index = .98, Tucker-Lewis ρ index = .97). A chi-square difference test ($\Delta\chi^2 = 9.79$, $df = 1$, $p < .05$) comparing the fit of the initial model to that of a nested model (with the frugality/price consciousness correlation restricted to unity) shows that frugality and price consciousness are not colinear and that the two traits are divergent. Likewise, comparing the fit of the initial model to that of another nested model (with the frugality/value consciousness correlation restricted to unity) again shows frugality and value consciousness as distinct traits ($\Delta\chi^2 = 8.22$, $df = 1$, $p < .05$).

Testing Nomological Validity. Nomological validity is demonstrated when a measure empirically demonstrates findings consistent with conceptual expectations (Cronbach and Meehl 1955). Here, the concern is whether the frugality scale is a reasonable explanation of an index of consumers' restrained product-use behaviors. Certainly, if frugality is assessed by the scale, then its scores should positively correlate with using products less and reusing products with new uses. Moreover, if the frugality scale is to have pragmatic utility, then the frugality scale should offer statistical explanations beyond that offered by other measures.

In addition to trait measures collected in study 3, the questionnaire asked about product use. The use items asked about last week's behaviors (i.e., eating leftovers, packing a lunch for the workday, timing showers, using grocery bags as trash bags, and drying laundry on a clothesline instead of using a clothes dryer) and were summed into a multiple-act behavioral index (Epstein 1979; Lastovicka and Joachimsthaler 1988) of product usage.

The regression model in the top section of Table 4 explains variance in usage behaviors, with traits and age as independent variables ($R^2 = 0.17$, $F = 2.41$, $p < .05$). These results reveal that, when simultaneously taking into account other explanations of usage behavior, frugality offers the only linear explanation of the usage measure.

Furthermore, the analysis shows the frugality measure offers this explanation above and beyond that offered by the competing independent variables examined. From the standpoint of discriminant validity, this means that the part of the variance of the frugality measure not in common with the other competing traits offers the explanation of product use.

TABLE 4

NOMOLOGICAL TEST RESULTS FROM STUDIES 3, 4, AND 6: REGRESSION MODELS OF RESTRAINED USE AS A FUNCTION OF TRAITS AND DEMOGRAPHICS

Independent variables	Standardized regression weights β
Results from study 3:[a]	
Frugality	.29[d]
Compulsive buying	−.12
Coupon proneness	.07
Value consciousness	.17
Price consciousness	.08
Balanced inventory of desirable responding	.05
Age in years	.09
Results from study 4:[b]	
Frugality	.24[d]
Materialism	.00
Interpersonal susceptibility	−.14
Ecocentrism	.09
Age in years	.15
Annual income range	.07
Results from study 6:[c]	
Frugality	.29[d]
Ecocentrism	.03
Age in years	.00
Annual income range	.12

[a] $R^2 = .17$, $F = 2.41$, $p < .05$.
[b] $R^2 = .15$, $F = 2.51$, $p < .05$.
[c] $R^2 = .19$, $F = 4.01$, $p < .05$.
[d] Statistically significant estimate ($|t| > 1.96$, $p < .05$).

A structural model (based on the covariances of the frugality items and the behavior measure) also examined the effect of frugality on restrained product use. Results provide a virtually identical estimate of the effect of frugality on behavior ($\gamma = .32$) as well as further evidence of the factorial structure of the frugality items ($\chi^2 = 40.77$, $df = 27$, $p = .04$, Bentler comparative fit index = .98, Tucker-Lewis ρ index = .97).

Discussion of Study 3. Study 3 shows the frugality measure (1) is not correlated with a contemporary measure of response-set bias, Paulhus' BIDR, and (2) is divergent with four other consumer behavior traits. Frugality scores did correlate with value consciousness, price consciousness, and noncompulsive buying. Frugality did not correlate with coupon proneness. Thus, extending the findings of study 2, more evidence for the discriminant validity of the frugality measure is present. Nomological results are also favorable; frugality offers an explanation of usage behaviors.

Discriminant-validity evidence from studies 2 and 3, however, is limited; a Campbell-Fiske (1959) multitrait-multimethod (MTMM) design was not used. Without this, one cannot control for the confounding effect of common-method artifact on trait correlations when examining discriminant validity.

Study 4: Convergent, Discriminant, and Nomological Validity

Study 4 examines construct validity with tests of convergent and discriminant validity in a MTMM design. This study also further examines nomological validity.

Data were obtained from a convenience sample of 101 married couples (ages ranging from 20 to 80 years, average age of about 45), with measures obtained from both members of each couple. Couples were approached waiting for flights to depart at an airport, and data were collected in gate seating areas.

Rigorous examination of discriminant validity requires a MTMM design with all traits assessed by all methods. This study used three traits (frugality, materialism, and interpersonal susceptibility to influence) with each trait assessed via two methods (wife's self-report and husband's report of his wife). Materialism was measured with the Richins and Dawson (1992) scale; Bearden, Netemeyer, and Teel's (1989) scale measured interpersonal susceptibility. As per the qualitative research, it seemed reasonable to examine if the frugality scale assesses nothing more than a lack of interpersonal susceptibility to influence. Moreover, it seemed reasonable to test if the frugality scale was redundant with merely a nonmaterialist tendency.

Nomological validity was examined by seeing how well wives' frugality scores, relative to wives' scores on other trait measures and demographic measures, provide statistical explanation of a battery of usage behaviors.

Evaluation of Convergent and Discriminant Validity. Campbell and Fiske's (1959) four requirements for convergent and discriminant validity were parsimoniously examined with Browne's (1984) direct product model (DPM) for MTMM data. The DPM, which has been advantageously applied in prior consumer research (Lastovicka, Murry, and Joachimsthaler 1990), represents that part of an MTMM correlation matrix due to common-trait and common-method factors as the direct product of a method-correlation matrix, $\mathbf{P}_M$, and a trait-correlation matrix, $\mathbf{P}_T$. The MTMM correlation matrix was analyzed with Browne's (1990) MUTMUM to estimate $\mathbf{P}_T$ and $\mathbf{P}_M$ as (with standard errors shown in parentheses):

$$\mathbf{P}_T = \begin{array}{l|lll} & \text{MAT} & \text{FRUGAL} & \text{INT SUSC} \\ \hline \text{MAT} & 1.00 & & \\ \text{FRUGAL} & -.26\ (.05) & 1.00 & \\ \text{INT SUSC} & .46\ (.06) & -.10\ \ (.07) & 1.00 \end{array}$$

and

$$\mathbf{P}_M = \begin{array}{l|ll} & \text{SELF} & \text{OTHER} \\ \hline \text{SELF} & 1.00 & \\ \text{OTHER} & .47\ (.05) & 1.00 \end{array} .$$

Campbell-Fiske requirements for convergence and divergence are met when DPM estimates meet certain criteria. The criterion for convergence is met by the estimated model, where the sole method correlation in $\mathbf{P}_M$ is positive and large. This means that the two measurement methods (self- and other reports) did correspond across traits. Campbell and Fiske's first requirement for discriminant validity (that all off-diagonals of $\mathbf{P}_T$ are less than unity) is also satisfied; this requirement means that the pure scores of different traits should be distinct and not perfectly correlated with one another. Thus, although frugals tend toward nonmaterialism and a lack of susceptibility to interpersonal influence, frugality is not perfectly correlated with the other traits. Therefore, frugality is distinct from these other traits. The second criterion for discriminant validity (method correlations in $\mathbf{P}_M$ are greater than trait correlations in $\mathbf{P}_T$) is also satisfied for the correlations with frugality pure scores; this means that correlations among measures with traits in common were higher than correlations between measures with only methods in common. Finally, the last requirement for discriminant validity (that the model fits the data) is also met ($\chi^2 = 9.85$, $df = 7$, $p = .20$, RMSEA = .04). The model fit means that the pattern of intertrait correlations within each method are captured by the DPM.

Thus, the data in study 4 further demonstrate discriminant validity for the frugality measure. Moreover, frugality was found to be related to other traits (negatively correlated with materialism and interpersonal susceptibility) in a manner consistent with an evolving empirical meaning of the frugality trait.

Testing Nomological Validity. Nomological validity was again examined in study 4 by the degree to which frugality scores explain consumer usage. In addition to the three trait measures (frugality, materialism, and interpersonal susceptibility) collected in the MTMM data, wives' data also included the Weigel and Weigel ecocentric measure, demographics, and a battery of questions asking about last week's product use. Usage questions (reusing foil or baggies, eating leftovers, packing a lunch for the workday, timing showers, turning off electric lights in unused rooms, using grocery bags as trash bags, and opening/closing drapes or blinds to control the amount of sun shining indoors through windows) were summed into a behavioral index, per Epstein (1979).

Multiple regression was used, with the traits, and age and income as independent variables. Overall, these independent variables are linearly related to the usage behaviors ($R^2 = 0.15$, $F = 2.51$, $p < .05$). The regression results, shown in the second section of Table 4, reveal that, after taking into account other likely explanations of usage behavior, frugality offers a linear explanation of the usage behavior measure. It is again appropriate to conclude that the frugality scale is useful in understanding usage behaviors.

Discussion of Study 4. Data were collected from 101 married couples. Convergent and discriminant validity were assessed in a multitrait (frugality, materialism, and interpersonal susceptibility to influence) and multimethod design (wife's self-assessment and husband's assessment). Relying on Browne's DPM model of the MTMM data, analysis

revealed evidence for the discriminant validity of the frugality scale. After controlling for measurement unreliability and method effects in the MTMM data, the frugality trait was again shown distinct from related traits.

Nomological validity tests are also favorable for the frugality scale. Specifically, (1) higher frugality scores correspond to lower scores in materialism and interpersonal susceptibility and (2) the frugality measure offers a useful statistical explanation of consumer-usage behaviors.

A limitation of study 4, as well as the preceding studies, is that frugality was examined only from a trait-model perspective. The interactional or trait-manipulation perspective to studying personality traits was ignored (Buss 1989; Endler and Rosenstein 1997). That is, the research so far has only focused on how the frugality trait was correlated to other traits, or how a disposition toward frugality provides direct main-effects information about usage behaviors. Psychologists have also examined the worth of traits from the interactional perspective, where both trait and situational (i.e., individual differences and experimental manipulation) data are collected. From an interactional perspective, the concern is learning about those personalities where manipulated experimental effects are the most/least likely to occur (Greenwald et al. 1986). Thus, the usefulness of frugality from the interactional perspective should be examined. Further, the research has thus far only examined the effect of frugality on consumer-use behaviors. Frugality's role in buying should also be examined.

Study 5: Nomological Assessment in a Mental Accounting Framework

Study 5 tests frugality in an interactional framework to studying traits. Moreover, it employs frugality to understand buying behavior.

More specifically, study 5 examines how frugality helps explain when mental accounting (Thaler 1985, 1990) experimental manipulations are most likely to exhibit effects. If frugality operates in a theoretically reasonable manner in mental accounting research, then additional evidence accrues for the nomological validity of the frugality measure.

It was reasoned that the frugal should be more immune from illogical, but "psycho"-"logical," mental accounting "buying traps." An example of such a trap is that consumers are more likely to spend windfalls or unexpected income in some account (e.g., an expenditure account for automobile maintenance) when the income is psychologically associated (e.g., an unexpected immediate cash-back rebate for purchasing automobile parts) with the particular expenditure account (O'Curry 1994). Here, the "trap" is that many do not realize that such cash "windfalls" can be moved from account to account at will (i.e., they are fungible). Despite an income source being associated with some account (e.g., auto maintenance), the cash need not be spent in that account (e.g., for a better grade of shock absorbers). However, the frugal are more restrained, and more likely to have a prioritized budget (retirement savings vs. auto maintenance vs. vacations, etc.), because of their more orderly nature. Thus windfall funds, which are merely psychologically associated with an account, should less likely be spent in the same account by the frugal.

Given different windfall income conditions (where income is [or is not] psychologically associated with an expenditure category), an interaction between frugality and income association is expected. Less frugal consumers should spend more in the category when the income is associated with the category than when the income is not associated. In contrast, more frugal consumers should not spend more whether or not the income is psychologically associated. Consistent with the interactional perspective, an experimental effect of income condition is expected only for the less frugal.

Design. An experiment used student subjects in a role-playing scenario that (1) described a purchasing plan, (2) described receiving windfall funds (which, in one randomly assigned experimental condition, was associated to the purchase being made vs. in the other condition, where the windfall was not associated with the purchase), and then (3) asked subjects if they would use the funds to make upgraded purchases.

More precisely, 39 undergraduates (66 percent female with an average age of 24) responded to a scenario assuming a weekend getaway at an oceanside resort, for which $350 in reservations for airfare, lodging, prix fixe dining, and a rental car were made through a travel agent. In one randomly assigned condition ($n = 20$) of a windfall not associated with the trip, an unexpected income tax refund of $60 was received in the mail just before going to the travel agent to pick up air tickets. For the other condition ($n = 19$), a windfall associated with the trip, the travel agent is described as handing the student a $60 check, reflecting an unexpected discount the agency grants first-time customers. All were then asked if they would change any plans—up-(down-) grades in rental car, prix fixe dining reservations, and so on—in light of the additional $60. Finally, demographic and frugality items were completed by all participants.

Analysis. Data were analyzed via Aiken and West's (1991) multiple regression approach for detecting interactions between continuous and categorical independent variables. A regression equation modeled the data as

$$\hat{y} = \beta_0 + \beta_1 \times a + \beta_2 \times f + \beta_3 \times (a \times f), \qquad \textbf{(1)}$$

where $\hat{y}$ is the estimate of the amount spent on vacation upgrades, a is a dummy variable for income association (set to unity for the "associated" or travel agent source and set to zero for the "nonassociated" or income-tax-refund source), f is a centered score on the frugality sum scale, $(a \times f)$ is the interaction variable, and β_0, β_1, β_2, and β_3 are regression coefficients.

The significant R^2 and the significant β_3 coefficients in Table 5 show an interaction effect. Comprehension of the interaction is aided with two separate regression lines, one for each condition of income association. For the nonasso-

TABLE 5

REGRESSION ESTIMATES OF MENTAL ACCOUNTING DATA IN STUDY 5

	Below mean sum score		At or above the mean score	
Parameters	Score-24[a]	Score-35[b]	Score-36[c]	Score-48[d]
R^2	.23*	.23*	.23*	.23*
F for R^2	3.51	3.51	3.51	3.51
β_0 constant	5.98	12.49	13.27	20.18
β_1 income association	34.04*	7.86*	4.71	−23.07
β_2 frugality	.59	.59	.59	.59
β_3 interaction	−2.37*	−2.37*	−2.37*	−2.37*

NOTE.—Equations are based on four different transformations of the frugality sum score.

[a]The lowest frugality score in study 5 is 24. The regression estimates in this column are based on frugality scores centered on 24, i.e., sum score − 24. Thus the significant estimate for β_1 ($p < .05$) in this column is the difference in expenditures between income association conditions at the lowest frugality score.

[b]The frugality score just below the mean in study 5 is 35. The regression estimates in this column are based on frugality scores centered on 35, i.e., sum score − 35. Thus the significant estimate for β_1 ($p < .05$) in this column is the difference in expenditures between income association conditions just below the mean frugality score. Other estimates of β_1 (based on all other centerings of frugality between 24 and 35) were also significant ($p < .05$). These estimates show income association effects on expenditures at lower-than-average levels of frugality.

[c]The mean frugality score in study 5 is 36. The regression estimates in this column are based on frugality scores centered on the mean, i.e., sum score − 36. Thus the nonsignificant estimate for β_1 ($p > .05$) in this column reveals no difference in expenditures between income association conditions at the mean frugality score.

[d]The maximum frugality score is 48. The regression estimates in this column are based on frugality scores centered on 48, i.e., sum score − 48. Thus the nonsignificant estimate for β_1 ($p > .05$) in this column reveals no difference in expenditures between income association conditions at the maximum frugality score. Other estimates of β_1 (based on all other centerings of frugality between 36 and 48) were also nonsignificant ($p > .05$), thus showing no effect of income association on expenditures with at- or above-average levels of frugality.

*$p < .05$.

ciated or income-tax-refund condition (when $a = 0$), the equation is

$$\hat{y} = \beta_0 + \beta_2 \times f. \quad \textbf{(2)}$$

And the equation for the associated or travel agent rebate condition (when $a = 1$) is

$$\hat{y} = \beta_0 + \beta_1 + (\beta_2 + \beta_3) \times f. \quad \textbf{(3)}$$

Testing for differences in $\hat{y}$ between the two regression lines—at different levels of frugality—allows identification of those ranges of frugality where the income-association manipulation affected spending. The analysis used the Johnson-Neyman technique (Aiken and West 1991, pp. 132–133), where different transformations of f were used to estimate values for the β_1 coefficient. Note that when f is zero, β_1 is the difference in $\hat{y}$ between regression Equations 2 and 3. So the term β_1 represents the conditional difference between the regression lines (or the conditional effect of the income-association manipulation) when the centering or transformation of f is zero. Thus Table 5 contains estimates for four versions of Equation 1, each using a different centering or transformation of f. These four estimates reveal the income-association effect occurred only in the lower range of frugality. The first two columns of Table 5, with estimates based on transformations below the mean sum score of 36 (i.e., [sum score − 24] and [sum score − 35]), show β_1 is positive and statistically different from zero, meaning an income-association effect on spending for those less than average in frugality. In contrast, the last two columns of estimates ([sum score − 36], where 36 was the mean frugal score, and [sum score − 48]) revealed that β_1 was statistically equivalent to zero, meaning no income-association effect on spending for those at average or above average in frugality.

In other words, for those less than average in frugality (the range of frugality represented by the first two columns of estimates in Table 5), the source of the income does influence spending ($\beta_1 \neq 0$ in the first two columns of Table 5). The less frugal are manipulated into spending more when funds are merely psychologically associated with an expenditure. In contrast, those at or above average in frugality (the range represented by the last two columns of estimates in Table 5), the source of the income does not influence spending ($\beta_1 = 0$). More frugal consumers do not violate the economic principle of fungibility. The framing or mere psychological association of funds' source with an expenditure does not encourage the more frugal to spend.

Discussion of Study 5. First, from the standpoint of adding to the nomological validity of the frugality scale, the experiment shows the trait contributing in an as-expected, interactive manner. Second, it shows the conceptual benefit of frugality to mental accounting research. By considering frugality, those most susceptible to income-source effects are identified. Only nonfrugals were led into purchasing a more expensive vacation when the windfall was associated with the vacation; the frugal were immune. Knowing the boundaries of experimental effects is useful (Greenwald et al. 1986). Moreover, the research showed frugality helps explain consumer buying behavior. Prior research with the scale concerned only usage behaviors.

A limitation of study 5, however, is overemphasis on internal validity. Use of an experiment with simulated purchases in a scenario and a convenience sample (also in other studies) weakens external validity. Thus, subsequent research must strive to address external validity by using probability samples with reports of real—and not simulated—behaviors.

Study 6: Known-Groups Evaluation and General Population Scale Norms

A classic manner of scale evaluation is a known-groups test in which scores of groups are compared, where it is expected that naturally existing groups should meaningfully differ on the scale in question (Cronbach and Meehl 1955). Thus, in study 6, frugality scores were collected from a

probability sample of the general adult population and then compared to scores of a likely more-frugal group: *Tightwad Gazette* subscribers.

Study 6 also provides information on the distribution of the scale's scores in the general adult population, thus providing projectable scale norms. Further, data were also collected to reexamine the nomological tests of frugality's role in explaining product usage from studies 3 and 4.

Design. A mail survey of 270 randomly selected adults living in the state of Arizona was conducted using two waves of mailings, an incentive, and follow-up phone calls to nonrespondents. These efforts yielded 164 usable questionnaires for a response rate of 61 percent.[2] General population data were compared with data from a survey of all 249 *Gazette* subscribers in Arizona. Using an incentive and a cover letter signed by the *Gazette* editor, one mailing generated 215 *Gazette* responses for a response rate of 86 percent.

The questionnaire for the *Tightwad* sample and the first wave of the general population sample contained frugality items, Weigel-Weigel ecocentric-scale items, product-use questions, and demographics. The questionnaire for the second wave of the general population sample was abbreviated, with only frugality items and demographics; 62 percent of the general population data were collected from the first mailing.

Norms and the Known-Groups Test. Frugality scores in the general sample were normally distributed (Lilliefors's [1967] test of departure from normality = .06, $p > .20$). Commensurate with a normally distributed variable, the mean, mode, and median values were virtually identical. The mean of the general population was at about 40, with a standard deviation of 4. Cronbach's alpha was 0.80. As shown in the last column of Table 2, a single-factor model fits the item covariances in the general population. One factor also fits well in the *Tightwad* subpopulation ($\chi^2 = 23.27$, $df = 20$, $p = .28$, Bentler comparative fit index = .99, Tucker-Lewis ρ index = .98).

Comparing the mean sum score for the general population ($\bar{X}_{GEN} = 40.43$) versus the *Tightwad* subpopulation mean estimate ($\bar{X}_{TW} = 44.43$) reveals a clear-cut difference ($t = 7.36$, $df = 378$, $p < .05$) in frugality, with a $r = .37$ effect of group membership on scores. The *Tightwad* subpopulation mean was at the eightieth percentile of the general population. Thus, based on a known-group test, there is additional support for the frugality scale's validity.

Reexamining a Nomological Test. The questionnaire from the first wave of data collection in the general population contained questions about product usage, demographics, and the Weigel-Weigel ecocentrism scale; this allowed reexamining the nomological tests from studies 3 and 4 in a probability sample. In the general population data in study 6, an index of less use and more reuse of household products was the dependent variable in a regression model, with frugality, ecocentrism, age, and income measures as independent variables.[3] At the bottom of Table 4, the results of study 6 again show frugality as a reasonable linear explanation of measures of consumer product use.

Summary of Study 6. Frugality was measured in mail surveys of the general population and the subpopulation of *Tightwad Gazette* subscribers. A known-groups comparison supports the frugality scale, with the *Tightwad* subpopulation mean higher than the general population's. These data also provide frugality norms for the general population.

DISCUSSION OF THE RESEARCH PROGRAM

Summary

Purpose and Method. This research offers a conceptualization and a measure of a lifestyle trait overlooked in consumer research: frugality. Through several distinct studies—using diverse empirical methods (e.g., experiment vs. survey, convenience vs. probability samples, multimethod vs. monomethod designs, qualitative vs. quantitative research)—the results show the frugality scale has a replicable unidimensional factor structure, reasonable internal consistency reliability, freedom from commonly considered response-set tendencies, discriminant validity, known-groups validity, and replicable nomological validity. All of these results are commensurate with recognized scale development standards (e.g., Bearden and Netemeyer 1998). Beyond desirable measurement qualities, frugality is shown to be empirically useful for understanding consumer product-use behaviors and for understanding consumer buying behavior.

[2]Comparison of the demographics of the Arizona general population sample with 1990 Census figures were in most cases favorable. The sample estimates matched the population—within sampling tolerances—with respect to household size (in the sample 19.9 percent were one-person households, 38.5 percent were two-person households, 39.9 percent were three-or-more person households in comparison to the corresponding population percentages of 24.4 percent, 37.4 percent, and 39.9 percent, respectively), race (in the sample 84.6 percent were white in comparison to 81.0 percent in the population), income (in the sample 57.7 percent had incomes under $35,000 per year in comparison to 61.7 percent in the population), and geographic location (89.6 percent of the sample were in urban areas in comparison to 89.2 percent for the population). The sample, however, was older (in the sample 24.4 percent were between 21 and 39 years, 50.0 percent were between 40 and 64 years, and 25.6 percent were 65 years and older in comparison to 46.5 percent, 35.0 percent, and 18.5 percent, respectively, in the population) and had higher levels of education (80.8 percent of the sample had at least some college-level education in comparison to 52.6 percent in the population) than the U.S. Census statistics.

[3]The 20 usage items asked about reuse of plastic baggies, eating leftovers, packing a lunch, timing showers, turning off unused lights, using grocery bags as trash bags, closing window drapes to control sun shining indoors, drying laundry on a clothesline, using old clothing for cleaning rags, saving grocery containers, writing a letter instead of phoning, cutting a family member's hair, maintaining your own air conditioning, making gifts, performing do-it-yourself household improvements, preparing meals from scratch, subscribing to a "time-of-day" electrical utility billing plan, setting air conditioning thermostats at 85 degrees or higher, using a timer on a hot water heater, and using low-flow shower heads.

Conceptual and Empirical Findings. Frugality is conceptualized as a lifestyle trait reflecting disciplined acquisition and resourcefulness in product and service use. Frugality is sacrifice in denying a series of short-term purchasing whims and industriousness by resourcefully using what is already owned or available for use; all of this is in service of achieving longer term goals.

An empirical understanding of frugality has evolved from the six studies reported herein. Empirically, the frugal are less susceptible to interpersonal influence, less materialistic, less compulsive in buying, and more price and value conscious. Being frugal does not correspond with being ecocentric nor with being prone to using coupons. A motivation to save the planet and being frugal are found unrelated. Further, it seems, being frugal means no necessary interest in the coupons used so often to promote convenience goods. Frugality consistently explains consumer usage behaviors. The data show the frugal use products and services resourcefully; this ranges from timing their showers to eating leftovers for lunch at work. Being frugal empirically affects purchasing. In a mental accounting experiment examining how the source of income influences spending, only the less frugal are manipulated into spending more. Scale norms from a general population survey, combined with data from *Tightwad Gazette* subscribers, show *Gazette* subscribers are on average at the top two deciles on the frugality scale.

Direction for Future Research

This research provides a beginning for future consumer research on frugality. Certainly, refinements in conceptualization and measurement are possible and desirable. Suggestions for this future research are now offered.

Frugality as a Macrovariable. It is not uncommon to comment on apparent trends in consumer frugality (e.g., Albight 1993). Yet, such remarks about an apparent change in frugality contain no empirical evidence. Thus, those interested in studying frugality over time should consider the measure developed herein.

Frugality as a Dependent Variable. Measures of age and income (along with other demographics including religion) did not explain which kinds of consumers were more or less frugal in the analysis for study 6. Knowing that the frugal were neither necessarily older nor with lower incomes may be surprising. However, these are useful counterintuitive findings to be reexamined in future research.

Thus, more needs to be known about the antecedents of frugality, especially psychological underpinnings. A fruitful direction is to view lifestyle traits, such as frugality, as peripheral secondary dispositions hierarchically influenced by more basic personality traits (Lastovicka 1982). Thus, future work could follow up on the Freudian observation that an anal drive determines frugality. Or, from a related trait-factor perspective (Goldberg 1993), conscientiousness may be a cardinal trait behind frugality. This hierarchical approach, however, assumes that a frugal tendency is cemented early in life from more basic drives. In contrast, the self-help literature suggests that many are not naturally frugal but converted frugals. Thus, another direction for future research would be to explore life events that bring consumers to aspire to become frugal or the contingencies that allow one to become frugal.

Frugality as an Independent Variable. Wells (1993) observes that consumer researchers spend most of their time examining acquisition behavior, with the purchase of brands or variants being dominant. Frugality offers help in understanding what the field has largely overlooked—nonbrand choice. For example, the purchase of strategic items like homes and college educations, and budget decisions between vacations or furniture would all seem fruitful if addressed with frugality. Certainly, the mental accounting experiment shed light on vacation purchases. However, even variant decisions, such as the purchase of private-label brands or used goods or purchasing with cash or debit cards (as opposed to credit cards or other lines of credit), could be assisted with frugality.

Also, consumer researchers have largely ignored research on postacquisition behaviors such as use and disposition (Wells 1993). Recall that the nomological data consistently showed frugality—and not ecocentrism—as explaining restrained usage behaviors. These findings suggest that proecological behaviors (e.g., using less stuff) are more motivated by frugality than ecocentric motives.

With respect to postconsumption, the frugals' tendency toward restraint suggests a desire to delay disposition and keep things in household inventory for some future, but unknown, use. Thus, for example, frugality may prove useful for understanding the behavior of those who cannot part with what they own, whose homes are strewn with decades of accumulation.

Finally, frugality may play an important role in understanding general satisfaction with life. Echoing the wisdom of the world's religions, empirical studies (Scitovsky 1976) show happiness in life is not determined by how much is purchased at the shopping mall but by satisfactions received from marriage and children, leisure, personal/spiritual growth, and friendships. When the frugal avoid the vicious cycle of working and borrowing more, to buy more, to then wanting to buy even more, it is likely that they have more time for their marriage, children, friends, and their own personal/spiritual development.

Ultimately, however, the worth of any concept and measure depends upon its utility to a discipline. This, of course, cannot be evaluated by a single study—nor even a comprehensive program of research studies such as reported in this article—but requires the efforts of disparate researchers over time. In the meantime, this research offers an adequate point of departure for future research on the consumer lifestyle trait of frugality.

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